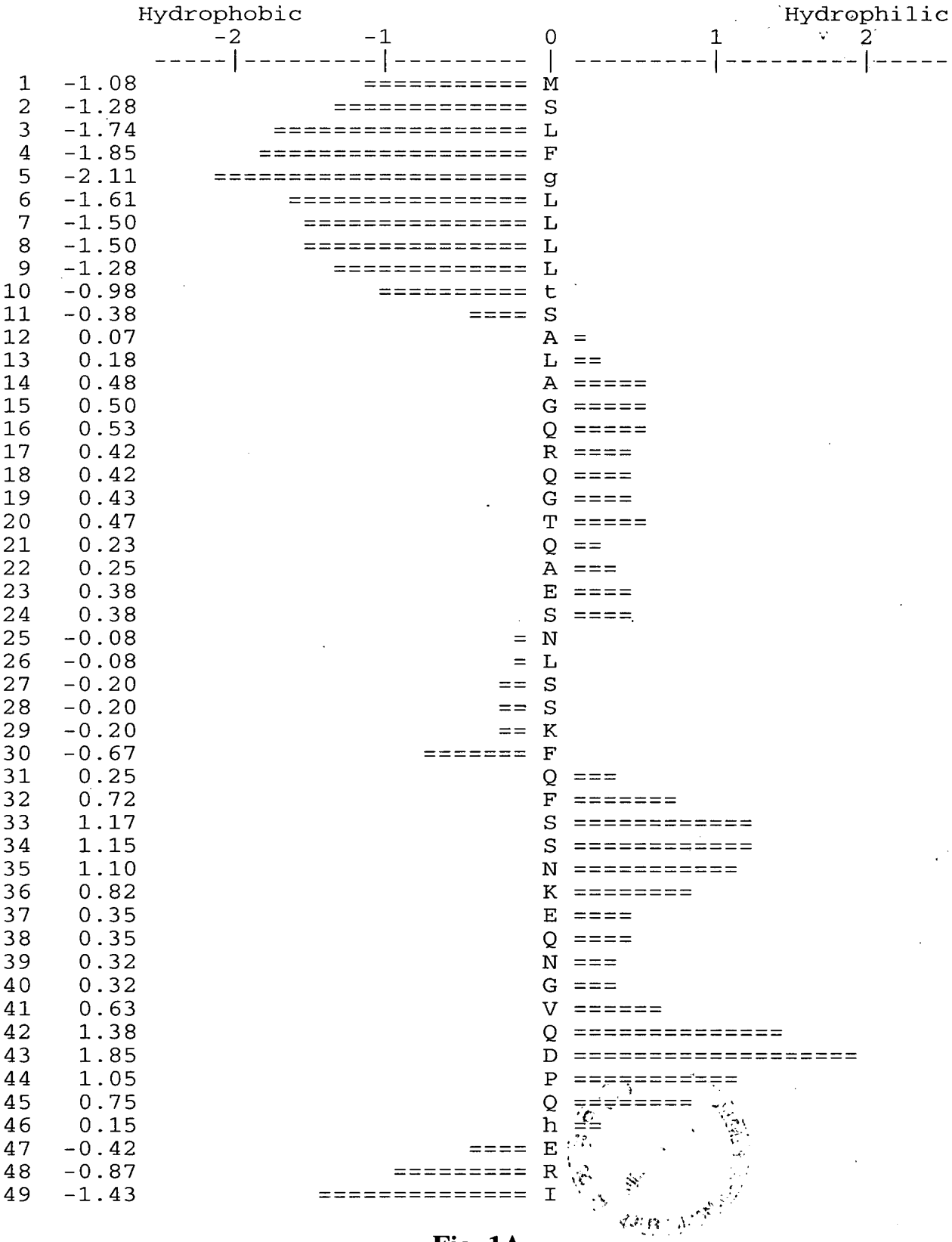

Hydrophobic
Hydrophilic
-2
-1
0
1
2
1 -1.08 M
2 -1.28 S
3 -1.74 L
4 -1.85 F
5 -2.11 g
6 -1.61 L
7 -1.50 L
8 -1.50 L
9 -1.28 L
10 -0.98 t
11 -0.38 S
12 0.07 A
13 0.18 L
14 0.48 A
15 0.50 G
16 0.53 Q
17 0.42 R
18 0.42 Q
19 0.43 G
20 0.47 T
21 0.23 Q
22 0.25 A
23 0.38 E
24 0.38 S
25 -0.08 N
26 -0.08 L
27 -0.20 S
28 -0.20 S
29 -0.20 K
30 -0.67 F
31 0.25 Q
32 0.72 F
33 1.17 S
34 1.15 S
35 1.10 N
36 0.82 K
37 0.35 E
38 0.35 Q
39 0.32 N
40 0.32 G
41 0.63 V
42 1.38 Q
43 1.85 D
44 1.05 P
45 0.75 Q
46 0.15 h
47 -0.42 E
48 -0.87 R
49 -1.43 I

Fig. 1A

```
 50   -1.10                ========== I
 51   -0.80                   ======== t
 52   -0.18                         == V
 53   -0.23                         == S
 54   -0.37                       ==== T
 55   -0.25                        === N
 56   -0.28                        === G
 57    0.22                            S ==
 58   -0.25                        === I
 59    0.05                            H
 60    0.05                            S
 61   -0.07                          = P
 62   -0.05                            R
 63   -0.55                     ====== F
 64    0.37                            P ====
 65    0.40                            H ====
 66    0.42                            T ====
 67    0.23                            Y ==
 68   -0.08                          = P
 69   -0.33                        === R
 70   -1.40              ============== N
 71   -0.93                 ========= T
 72   -1.17               ============ V
 73   -1.17               ============ L
 74   -0.95                ========== V
 75   -0.95                ========== W
 76    0.12                            R =
 77    0.12                            L =
 78    0.45                            V =====
 79    0.45                            A ====
 80   -0.03                            V
 81   -0.08                          = E
 82   -0.55                     ====== E
 83   -1.35              ============== N
 84   -1.45              ============== V
 85   -1.62            ================ W
 86   -0.55                     ====== I
 87    0.25                            Q ===
 88    0.72                            L =======
 89    0.60                            T ======
 90    0.67                            F =======
 91    0.78                            D ========
 92    0.78                            E ========
 93    0.78                            R ========
 94    0.28                            F ===
 95    1.20                            G ============
 96    1.70                            L ================
 97    2.50                            E ==========================
 98    1.70                            D ================
 99    1.03                            P ==========
100    1.53                            E ============
101    0.65                            D =======
```

Fig. 1B

```
102   0.65                                  D =======
103  -0.27                              === I
104  -0.22                               == C
105   0.45                                  K =====
106  -0.30                              === Y
107   0.58                                  D ======
108   0.58                                  F ======
109   1.00                                  V ==========
110   1.30                                  E ============
111   1.30                                  V ============
112   1.55                                  E ================
113   0.98                                  E ==========
114   0.18                                  P ==
115  -0.12                                = S
116  -0.17                               == D
117  -0.17                               == G
118  -0.73                          ======= T
119  -0.83                         ======== I
120  -0.53                            ===== L
121  -0.80                         ======== G
122  -0.80                         ======== R
123  -1.37                   =============== W
124  -1.05                      ============ C
125  -0.88                       ========= G
126  -0.88                       ========= s
127   0.18                                  G ==
128   0.22                                  T ==
129  -0.02                                  V
130   0.28                                  P ===
131   0.78                                  G ========
132   0.78                                  K ========
133   0.32                                  Q ===
134   0.32                                  I ===
135   0.32                                  S ===
136   0.77                                  K ========
137  -0.03                                  G
138   0.47                                  N =====
139   0.02                                  Q
140  -0.27                              === I
141   0.08                                  R =
142   0.08                                  I =
143   0.88                                  R =========
144   0.00                                  F
145   0.00                                  V
146   0.25                                  S ===
147   0.25                                  D ===
148   0.25                                  E ===
149  -0.25                              === Y
150   0.13                                  F =
151   0.13                                  P =
152  -0.03                                  S
153  -0.38                            ==== E
154  -0.97                       ========== P
```

Fig. 1C

```
155   -1.35              ============== G
156   -1.32               ============= F
157   -1.20                ============ C
158   -1.28               ============= I
159   -1.20                ============ H
160   -1.12                 =========== Y
161   -0.70                     ======= N
162   -1.15                ============ I
163   -0.92                   ========= V
164   -0.17                        == M
165   -0.03                           P
166   -0.28                      === Q
167   -0.27                      === F
168    0.15                          T =
169    0.27                          E ===
170   -0.48                    ===== A
171   -0.70                  ======= V
172   -0.45                     ==== S
173   -0.50                   ===== P
174   -0.45                   ===== S
175   -0.58                  ====== V
176   -0.63                  ====== L
177   -0.33                     === P
178   -0.63                  ====== P
179   -0.13                       = S
180   -0.48                   ===== A
181   -0.70                 ======= L
182   -0.37                    ==== P
183   -0.33                     === L
184   -0.12                       = D
185   -0.92                  ========= L
186   -1.18               ============ L
187   -0.97                 ========== N
188   -1.42              ============== N
189   -2.02     ==================== A
190   -2.00     ==================== I
191   -2.00     ==================== t
192   -0.93                 ========= A
193   -0.35                    ==== F
194   -0.23                      == s
195    0.03                          T
196    0.60                          L ======
197    0.52                          E =====
198   -0.28                      === D
199   -0.28                      === L
200    0.02                          I
201    0.82                          R ========
202    0.82                          Y ========
203    1.03                          L ==========
204    1.37                          E ==============
205    0.57                          P ======
206    1.07                          E ==========
207    0.27                          R ===
```

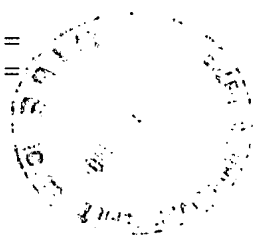
Fig. 1D

```
208    0.27                                  w ===
209    0.93                                  Q =========
210    0.60                                  L ======
211    0.52                                  D =====
212    0.52                                  L =====
213    0.82                                  E ========
214    0.25                                  D ===
215   -0.42                             ==== L
216   -0.08                               = Y
217    0.00                                 R
218   -0.80                         ======== P
219   -0.80                         ======== T
220   -0.23                               == w
221   -0.15                               = Q
222   -0.60                           ====== L
223   -0.55                           ====== L
224   -0.67                         ======= G
225   -0.67                         ======= K
226   -0.67                         ======= A
227   -0.08                               = F
228    0.38                                 V ====
229    1.13                                 F ===========
230    1.30                                 G ============
231    1.05                                 R ===========
232    1.05                                 K ===========
233    0.25                                 S ===
234    0.23                                 R ==
235   -0.57                           ====== V
236   -0.62                           ====== V
237   -0.43                             ==== D
238   -0.43                             ==== L
239    0.37                                 N ====
240    0.08                                 L =
241    0.88                                 L =========
242    0.88                                 T =========
243    0.57                                 E ======
244    0.12                                 E =
245   -0.55                           ====== V
246   -0.37                             ==== R
247   -0.87                       ========= L
248   -0.07                               = Y
249    0.35                                 S ====
250   -0.12                               = C
251    0.10                                 T =
252   -0.08                               = P
253   -0.03                                R
254   -0.83                         ======== N
255   -0.37                             ==== F
256    0.55                                 S ======
257    1.00                                 V ==========
258    0.95                                 S ==========
259    1.40                                 I ==========
260    2.20                                 R ======================
```

Fig. 1E

```
261   1.63                                  E ================
262   1.63                                  E ================
263   1.07                                  L ===========
264   1.07                                  K ===========
265   0.15                                  R =
266  -0.92                        ========= T
267  -0.85                        ========= D
268  -1.35                   ============== T
269  -1.45                  =============== I
270  -1.45                   ============== F
271  -1.33                    ============= W
272  -1.02                       ========== P
273  -0.52                            ===== G
274  -0.02                                  C
275  -0.02                                  L
276   0.28                                  L ===
277   0.58                                  V ======
278   0.87                                  K =========
279   0.20                                  R ==
280  -0.38                          ==== C
281  -0.38                          ==== G
282  -0.55                        ====== G
283  -0.85                     ========= N
284  -0.97                    ========== C
285  -0.77                      ======== A
286  -0.85                     ========= C
287  -0.65                       ======= C
288   0.02                                  L
289   0.15                                  H ==
290   0.27                                  N ===
291   0.07                                  C =
292  -0.02                                  N
293  -0.05                                  E
294  -0.50                          ===== C
295   0.17                                  Q ==
296  -0.12                              = C
297  -0.02                                  V
298   0.73                                  P =======
299   1.23                                  S ============
300   1.20                                  K ============
301   0.62                                  V ======
302   1.37                                  T ==============
303   1.18                                  K ============
304   0.38                                  K ====
305  -0.08                              = Y
306  -0.40                          ==== H
307   0.18                                  E ==
308  -0.32                           === V
309   0.43                                  L ====
310   0.67                                  Q =======
311   0.63                                  L ======
312   0.68                                  R =======
313   0.68                                  P =======
```

Fig. 1F



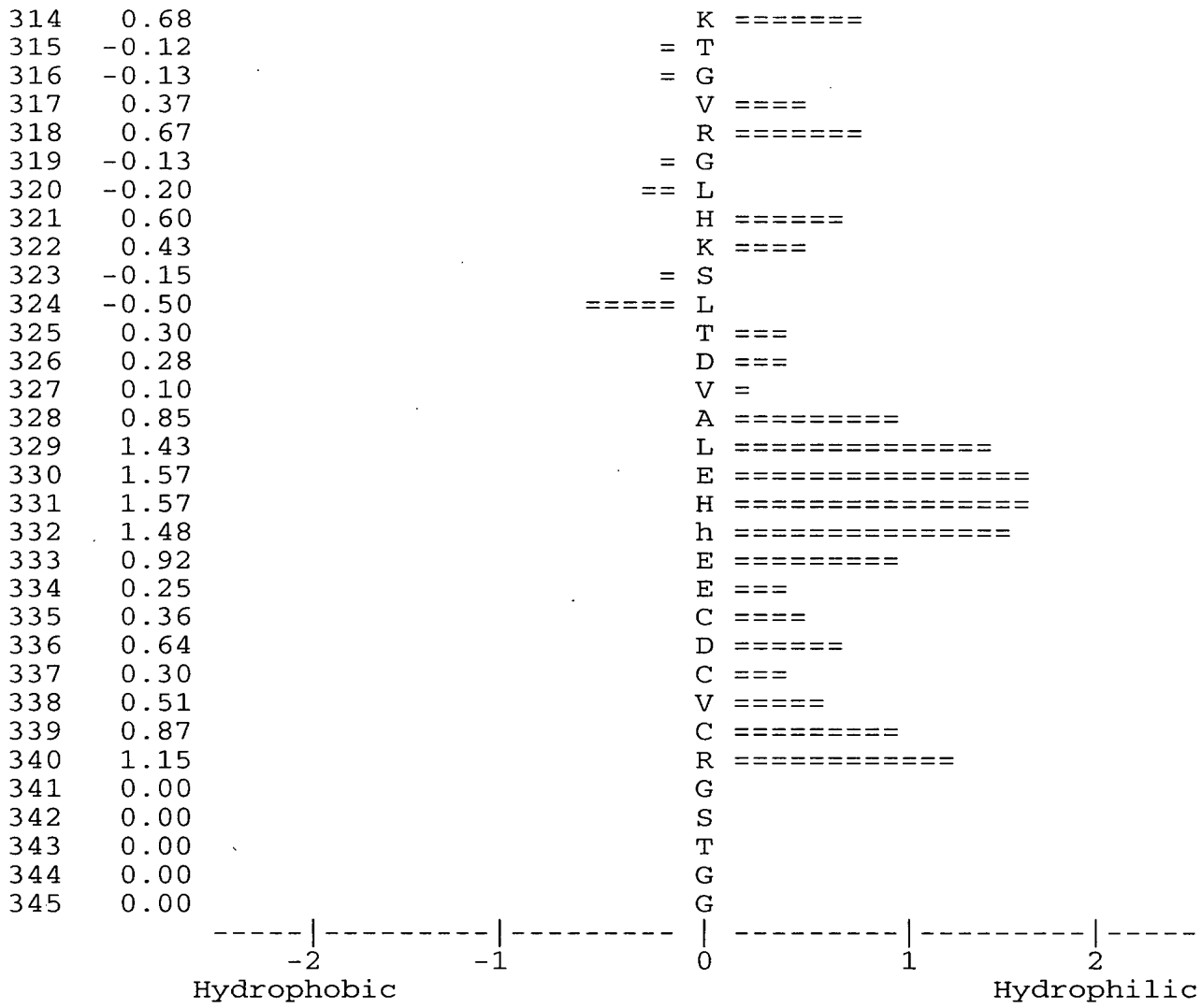

314 0.68 K =======
315 -0.12 = T
316 -0.13 = G
317 0.37 V ====
318 0.67 R =======
319 -0.13 = G
320 -0.20 == L
321 0.60 H ======
322 0.43 K ====
323 -0.15 = S
324 -0.50 ===== L
325 0.30 T ===
326 0.28 D ===
327 0.10 V =
328 0.85 A =========
329 1.43 L ==============
330 1.57 E ================
331 1.57 H ================
332 1.48 h ==============
333 0.92 E =========
334 0.25 E ===
335 0.36 C ====
336 0.64 D ======
337 0.30 C ===
338 0.51 V =====
339 0.87 C =========
340 1.15 R ============
341 0.00 G
342 0.00 S
343 0.00 T
344 0.00 G
345 0.00 G
-2
-1
0
1
2
Hydrophobic
Hydrophilic

Fig. 1G

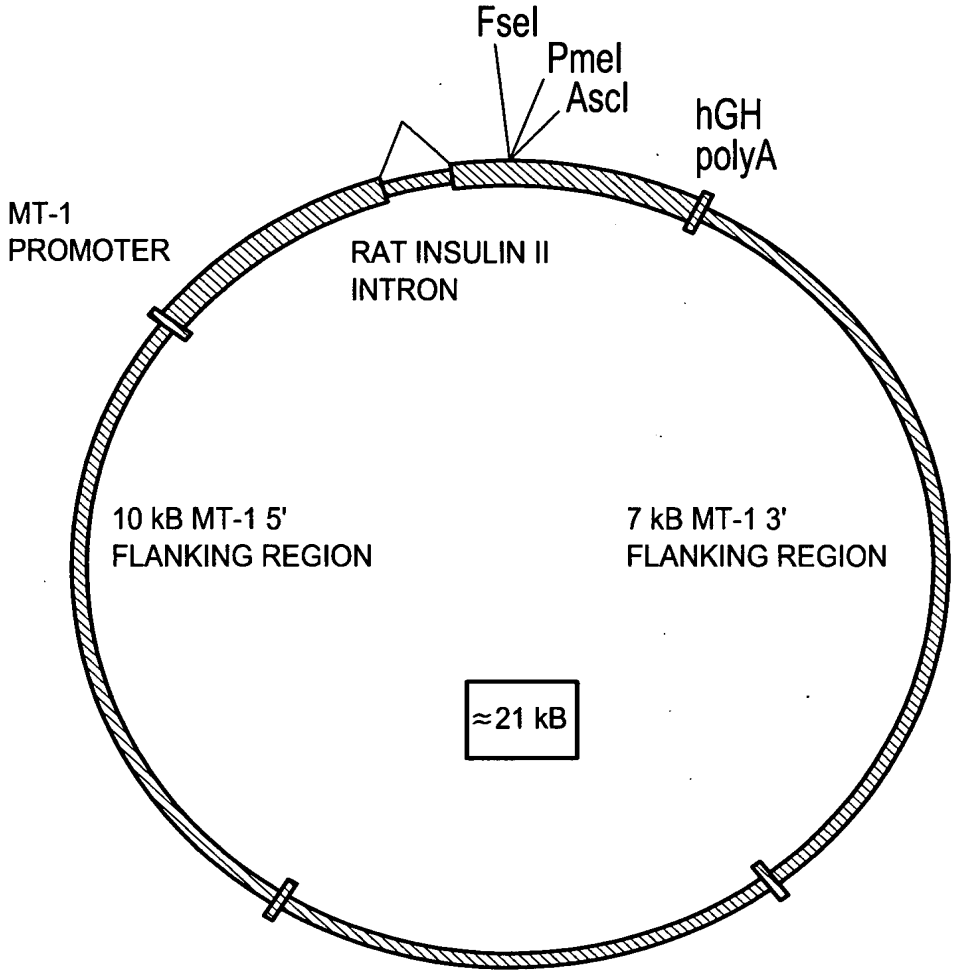

FseI
PmeI
AscI
hGH
polyA
MT-1
PROMOTER
RAT INSULIN II
INTRON
10 kB MT-1 5'
FLANKING REGION
7 kB MT-1 3'
FLANKING REGION
≈21 kB

Fig. 2

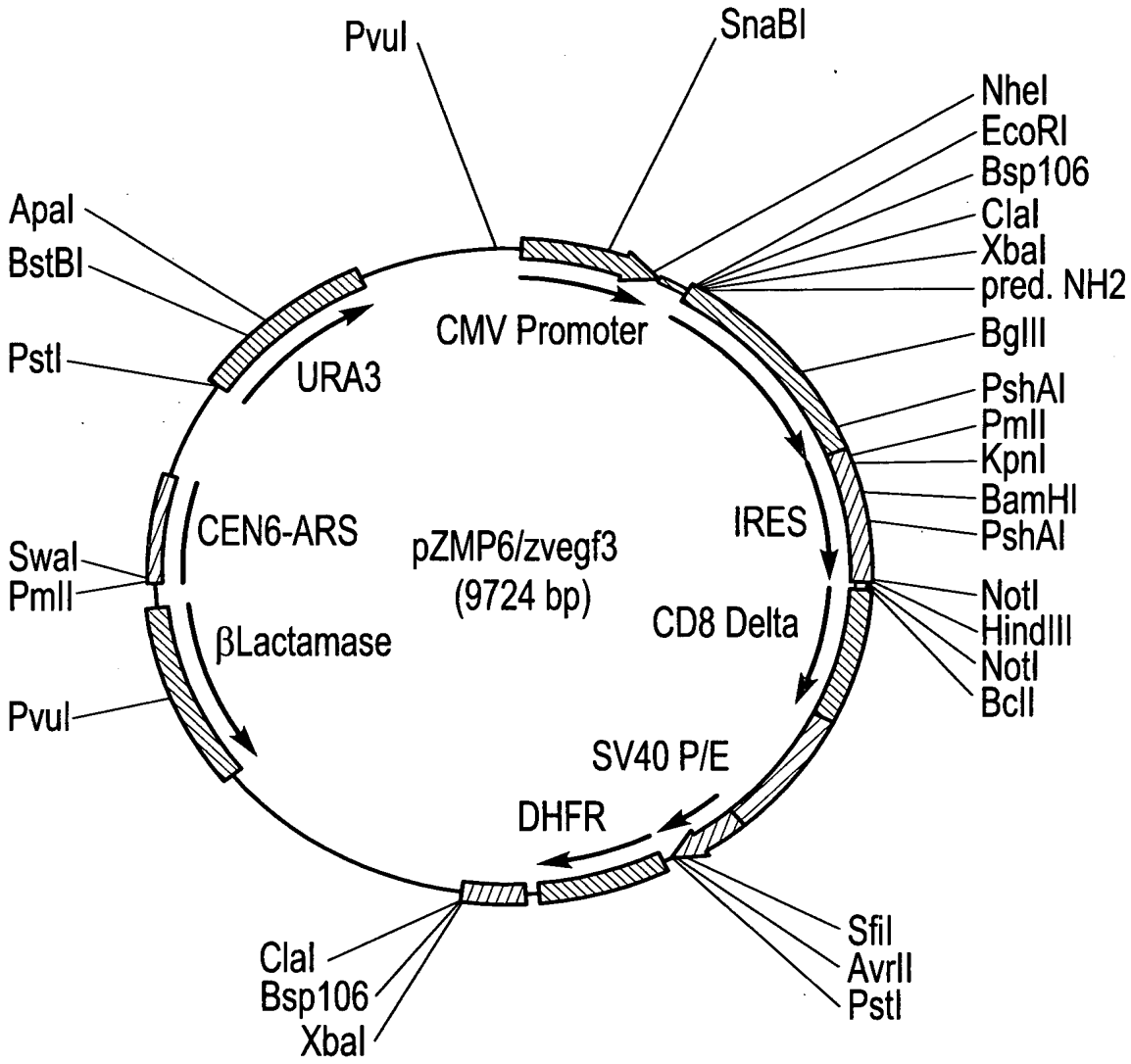

PvuI
SnaBI
NheI
EcoRI
Bsp106
ClaI
XbaI
pred. NH2
BglII
PshAI
PmlI
KpnI
BamHI
PshAI
NotI
HindIII
NotI
BclI
ApaI
BstBI
PstI
URA3
CMV Promoter
CEN6-ARS
SwaI
PmlI
βLactamase
PvuI
pZMP6/zvegf3
(9724 bp)
IRES
CD8 Delta
SV40 P/E
DHFR
ClaI
Bsp106
XbaI
SfiI
AvrII
PstI

Fig. 3

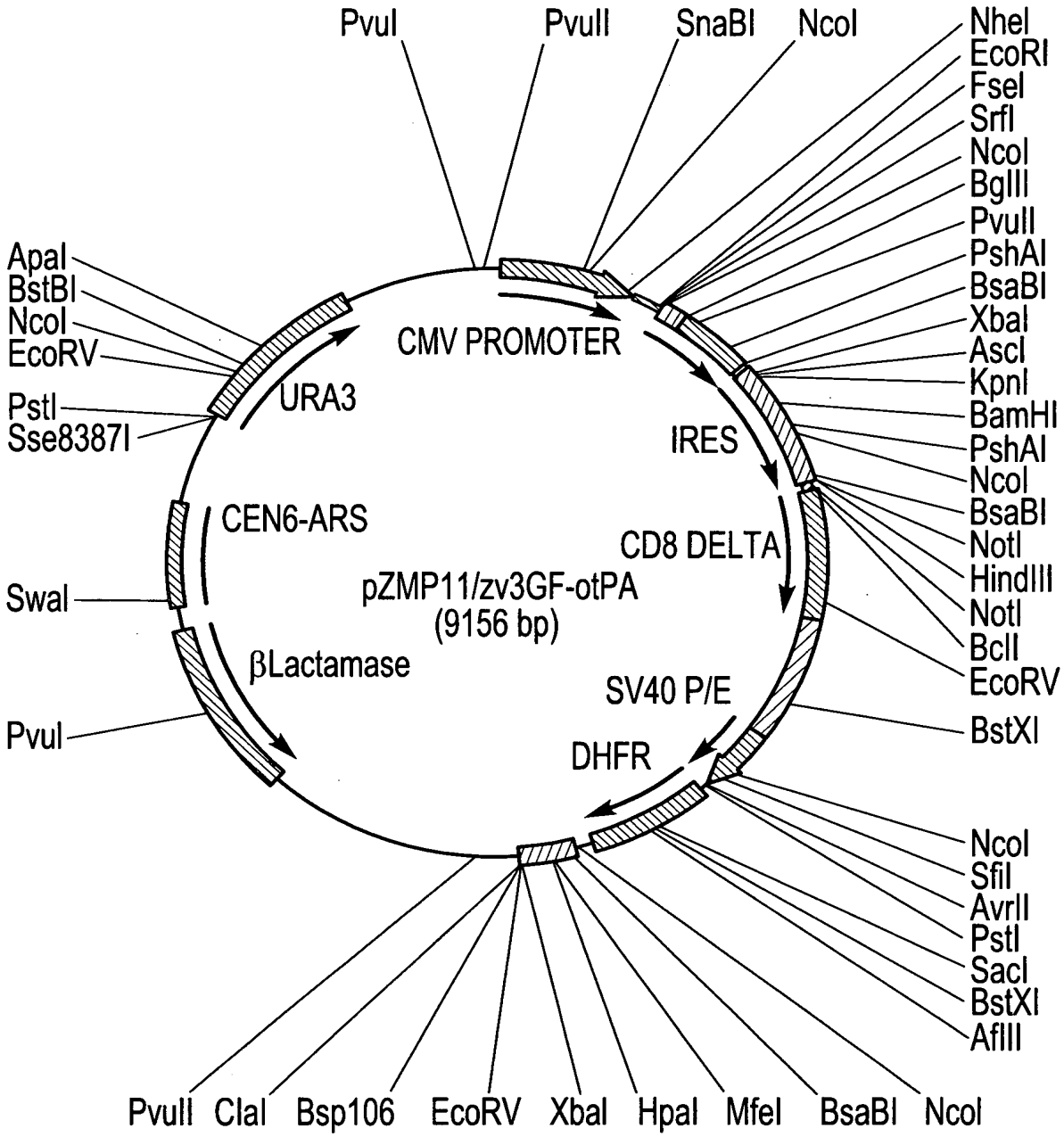

PvuI
PvuII
SnaBI
NcoI
NheI
EcoRI
FseI
SrfI
NcoI
BglII
PvuII
PshAI
BsaBI
XbaI
AscI
KpnI
BamHI
PshAI
NcoI
BsaBI
NotI
HindIII
NotI
BclI
EcoRV
BstXI
NcoI
SfiI
AvrII
PstI
SacI
BstXI
AflII
PvuII
ClaI
Bsp106
EcoRV
XbaI
HpaI
MfeI
BsaBI
NcoI
ApaI
BstBI
NcoI
EcoRV
PstI
Sse8387I
SwaI
PvuI
CMV PROMOTER
URA3
IRES
CD8 DELTA
CEN6-ARS
pZMP11/zv3GF-otPA
(9156 bp)
βLactamase
SV40 P/E
DHFR

Fig. 4

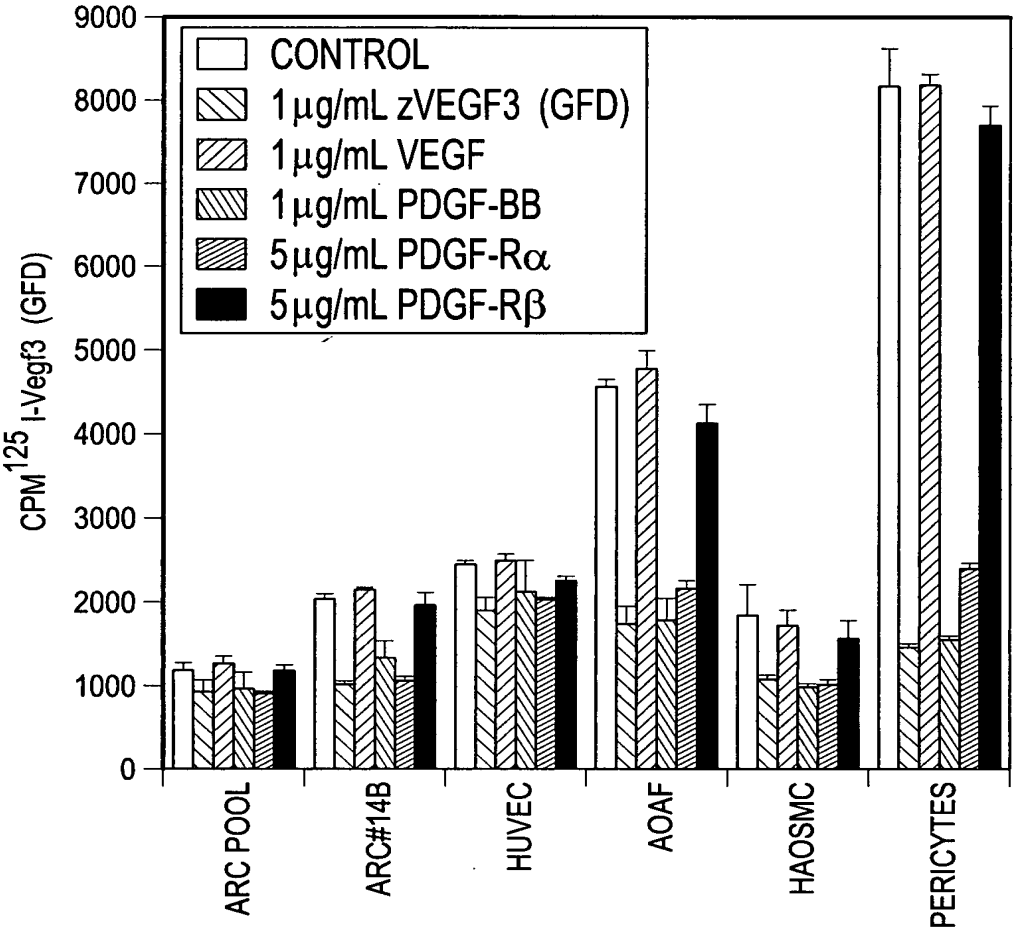

CONTROL
1µg/mL zVEGF3 (GFD)
1µg/mL VEGF
1µg/mL PDGF-BB
5µg/mL PDGF-Rα
5µg/mL PDGF-Rβ
CPM 125 I-Vegf3 (GFD)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
ARC POOL
ARC#14B
HUVEC
AOAF
HAOSMC
PERICYTES

Fig. 5

```
MSLFGLLLLTSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS

MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
         10         20         30         40         50         60

PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL

PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
         70         80         90        100        110        120

GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA

GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
        130        140        150        160        170        180

LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL

LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
        190        200        210        220        230        240

LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK

LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK
        250        260        270        280        290        300

VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG (SEQ ID NO:2)

VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG (SEQ ID NO:43)
        310        320        330        340
```

Fig. 6